

LARGE MULTI-FUNCTION INTEGRATED CIRCUIT DEVICE

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ABSTRACT

An integrated circuit device includes a thin semiconductor layer disposed on a surface of a wafer, a plurality of wafer-scale integrated (WSI) circuits formed on the semiconductor layer, and a node formed on the semiconductor layer that provides an optoelectronic interface to an axial optical data bus for high-speed optical interconnectivity between the WSI circuits and other external devices interconnected to the optical data bus.